STATE OF IOWA
DEPARTMENT OF COMMERCE
BEFORE THE IOWA UTILITIES BOARD

IN RE:	)	
MIDAMERICAN ENERGY COMPANY	)	**DOCKET NO. EPB-2014-0156**
ENVIRONMENTAL PLAN	)	

DIRECT TESTIMONY
OF
JENNIFER A. McIVOR

WITNESS IDENTIFICATION

Q. Please state your name and business address.

A. My name is Jennifer A. McIvor. My business address is 7215 Navajo Street, Council Bluffs, Iowa 51501.

Q. By whom are you employed and in what capacity?

A. I am employed by MidAmerican Energy Company ("MidAmerican") as Director, Environmental Programs, Compliance and Permitting. My current responsibilities are twofold. First, I manage the environmental programs to ensure MidAmerican and its facilities obtain the appropriate permits and remain in compliance with permit conditions and associated regulatory requirements. Second, I integrate environmental assessments of existing and anticipated environmental regulations into planning and operating decisions of business units, advising management of the impact of proposed regulations and develop potential compliance strategies.

Q. Please describe your educational and professional background.

A. I received a Bachelor of Arts Degree with a concentration in Environmental Studies from the Wilkes Honors College of Florida Atlantic University, a Juris Doctorate from Vermont Law School, and a Master of Environmental Management from the Yale School of Forestry and Environmental Studies. I was admitted by examination to practice law in Iowa and Nebraska and maintain my licensure in both states.

Q. Please describe your business experience.

A. During law school, I clerked for the Nebraska Attorney General Office of Agriculture, Environment and Natural Resources. During graduate school, I clerked for The Wilderness Society in Washington, D.C. I joined MidAmerican in 2008 as an environmental coordinator for generation, and have held positions of increasing responsibility for environmental issues within MidAmerican.

PURPOSE OF TESTIMONY

Q. What is the purpose of your direct testimony?

A. My testimony supports MidAmerican's proposed 2014 Environmental Plan and Budget describing current and future air emissions reduction requirements and the potential impact on MidAmerican's coal-fueled plants.

KEY AIR EMISSIONS REDUCTION DRIVERS

Q. Please describe current Clean Air Act requirements that impact MidAmerican facility emissions.

A. The U.S. Environmental Protection Agency ("EPA") periodically reviews the National Ambient Air Quality Standards to determine whether they remain protective of human health and the environment. Recently, the agency has proposed or fully promulgated revised standards for several criteria air pollutants including fine particulate matter,

ozone, sulfur dioxide and nitrogen dioxide. These lowered standards have the potential to drive emissions regulations and resulting reductions for MidAmerican units.

To address ambient air quality, the EPA promulgated two rules that would require significant emissions reductions from power plants during the next two decades. The Clean Air Interstate Rule and the Clean Air Mercury Rule were effective final rules on July 11 and July 18, 2005, respectively. However, both of these rules were legally challenged. On December 23, 2008, the U.S. Court of Appeals for the D.C. Circuit remanded without vacatur the Clean Air Interstate Rule. This ruling effectively states that this rule as in effect on July 11, 2005, will remain in place until such time as the EPA revises the rule. In regards to the Clean Air Mercury Rule, on February 8, 2008, the U.S. Court of Appeals for the D.C. Circuit held that the delisting of coal and oil-fueled electric generating units from the list of sources whose emissions are regulated under section 112 of the Clean Air Act was unlawful. Further, because coal-fueled electric generating units are listed sources under section 112, regulation of existing units' mercury emissions under section 111 is prohibited, thereby invalidating the regulatory approach of the Clean Air Mercury Rule (i.e., cap and trade program). Therefore, the Clean Air Mercury Rule was vacated. Subsequent appeals to the full court (en banc) and U.S. Supreme Court were denied.

Q. You state that the U.S. Court of Appeals for the D.C. Circuit allowed the Clean Air Interstate Rule as effective July 11, 2005, to remain in effect until revised by the EPA. What is the status of revisions to this rule?

A. The EPA issued the proposed Clean Air Interstate Rule replacement rule on August 2, 2010. The final rule is known as the Cross-State Air Pollution Rule and was issued in

July 2011, with an effective date of January 1, 2012. The Cross-State rule made significant changes from the Clean Air Interstate Rule, and even from the draft replacement rule, including: adding states that were not subject to the requirements of the Clean Air Interstate Rule or the draft replacement rule, adding certain states to new programs, creating two sulfur dioxide allowance trading groups, separating the Cross-State program from the Acid Rain program, lowering statewide emission allowance budgets, setting a cap on statewide emissions, and setting early compliance deadlines. Like the Clean Air Interstate Rule, the Cross-State Air Pollution Rule has two phases, but both phases were set to occur in 2012.

In September 2011, eight states and several private companies filed a number of lawsuits to prevent implementation of the Cross-State Air Pollution Rule. The U.S. Court of Appeals for the District of Columbia issued a last-minute stay of the Cross-State Air Pollution Rule on December 30, 2011. The court also directed the EPA to continue implementing the Clean Air Interstate Rule while the Cross-State Air Pollution Rule litigation proceeds. The outcome of the case remains uncertain, although the U.S. Supreme Court heard arguments on the rule in December 2013 and a decision is pending. As a result of previous efforts to reduce nitrogen oxides emissions through the installation of low-nitrogen oxide burners and over-fire air as well as selective non-catalytic reduction systems at Neal Units 3 and 4, the installation of scrubbers to control sulfur dioxide emissions at the Louisa Generating Station ("Louisa") and Walter Scott Energy Center ("WSEC) Units 3 and 4, and the current projects to install scrubbers at Neal Units 3 and 4, MidAmerican is reasonably well positioned to comply with the Cross-State Air Pollution Rule should it be affirmed by the court.

Q. What will be the timing of implementation and reductions required under the replacement to the Clean Air Mercury Rule?

A. Following remand of the Clean Air Mercury Rule, the EPA developed new mercury and other hazardous air pollutants ("HAPs") regulations under the Clean Air Act's Maximum Achievable Control Technology provisions. The Utility Mercury and Air Toxics Standards ("MATS"), previously referred to as the Utility Hazardous Air Pollutants Maximum Achievable Control Technology ("MACT") rule, were finalized February 16, 2012, and took effect April 16, 2012.

The MACT limits established by the EPA are based on control efficiencies expected from the installation of scrubbers for sulfur dioxide and acid gases, baghouses for toxic metals, and activated carbon injection ("ACI") for mercury. The EPA expects facilities to comply with the new standards through a combination of strategies, including the use of existing emission controls, upgrades to existing controls, installation of new emission controls, and fuel switching. In the event that one of these strategies is not technically or economically feasible, the unit must be shut down.

Q. When will MidAmerican achieve compliance with the MATS rule?

A. The EPA concluded that installation of controls or shutdown of units should be easily achievable within three years, or by April 16, 2015. However, the agency encourages state permitting authorities to exercise discretion, as allowed under the Clean Air Act, to allow a fourth year, or until April 16, 2016, for units to make the changes that will bring each unit into compliance. WSEC Unit 4 is fully compliant with the MATS requirements. Following the installation of ACI at WSEC Unit 3, Louisa, Neal Unit 3

and Neal Unit 4 as proposed in this Plan Update, each of these units will also be fully compliant with the MATS requirements.

MidAmerican assessed the costs of its compliance options for units not currently scheduled to have controls installed. MidAmerican determined that, based on economic and other considerations, it is in the best interest of its customers to comply with the MATS and other environmental requirements by discontinuing the utilization of coal as a fuel and not installing environmental controls on five operating units. Therefore, by April 16, 2016, MidAmerican will cease burning coal at Neal Energy Center Units 1 and 2, Walter Scott Jr. Energy Center Units 1 and 2, and Riverside Generating Station. Riverside is fully permitted and currently capable of operating on natural gas and will continue to be utilized in that manner.

Q. What is the status of federal climate change regulation?

A. On April 2, 2007, the United States Supreme Court held that greenhouse gas emissions, including carbon dioxide, are air pollutants covered by the Clean Air Act. (*Massachusetts v. Environmental Protection Agency*, 549 U.S. 497 (2007).) The Supreme Court found that EPA was required to determine whether or not emissions of greenhouse gases from new motor vehicles cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare.

In April 2009, the EPA responded to the Supreme Court's decision by proposing a finding that greenhouse gases do contribute to air pollution that may endanger public health or welfare. EPA finalized this Endangerment Finding December 7, 2009. Subsequently, EPA issued regulations under the Clean Air Act to control greenhouse gas emissions from light duty vehicles in May 2010. EPA interpreted this

action to regulate emissions triggers Clean Air Act permitting requirements for greenhouse gas emissions for stationary sources under the New Source Review/Prevention of Significant Deterioration and Title V Operating Permit programs.

Following this "triggering event," the EPA finalized a greenhouse gas emissions Tailoring Rule in June 2010 to "tailor" the major source applicability thresholds for greenhouse gas emissions under the Prevention of Significant Deterioration and Title V programs of the Clean Air Act and to set a Prevention of Significant Deterioration significant emission increase threshold for greenhouse gas emissions. The Tailoring Rule focuses on the largest sources of greenhouse gas emissions, increasing the emission thresholds at which Prevention of Significant Deterioration requirements become applicable to greenhouse gases as compared to other regulated pollutants. Without the Tailoring Rule, lower emission thresholds would take effect, requiring a multitude of stationary sources to obtain Clean Air Act permit coverage in what EPA has deemed "absurd results" in its defense of the Tailoring Rule.

Under the Tailoring Rule, new sources that have the potential to emit 100,000 tons of carbon dioxide-equivalent or more per year are subject to Prevention of Significant Determination and Title V permitting requirements. Additionally, existing sources which have the potential to emit 100,000 tons of carbon dioxide-equivalent or more per year and which make a modification to the source that will increase carbon dioxide-equivalent emissions by 75,000 tons per year or more are also subject to greenhouse gas permitting requirements.

The EPA's greenhouse gas regulatory scheme was challenged and in June 2012, the D.C. Circuit Court of Appeals upheld the agency's greenhouse gas endangerment

finding as well as the Tailoring Rule. That decision was petitioned to the U.S. Supreme Court, which heard arguments concerning the Tailoring Rule on February 24, 2014. The sole issue before the court was whether the agency's determination that greenhouse gases from new motor vehicles permissibly triggered Clean Air Act permitting requirements for stationary sources which emit greenhouse gases. A decision in the case is expected by the end of the Court's term in June.

Finally, in April 2012, the EPA proposed New Source Performance Standards for Greenhouse Gas Emissions from New Sources. Under the proposed rule, new natural gas- and coal- fueled units must meet a limit of 1,000 pounds of carbon dioxide-equivalent per megawatt-hour. The agency has not taken final action on the rule, but it is expected that one a final new sources rule is issued the agency will turn its attention to developing a similar rule for existing power plants.

Q. What is the National Climate Action Plan?

A. The National Climate Action Plan was introduced by President Obama in June 2013, reaffirming his commitment to reduce U.S. greenhouse gas emissions by 17% from 2005 levels by 2020. As part of this plan, the EPA was directed to set national limits on greenhouse gas emissions from power plants. Specifically, the agency must:

(1) Re-propose the New Source Performance Standards for Greenhouse Gas Emissions from New Sources (the "New Sources Rule") by September 2013 and finalize in a timely fashion; and

(2) Propose New Source Performance Standards for Greenhouse Gas Emissions from Existing Sources (the "Existing Sources Rule") by June 2014.

The Existing Sources Rule must be finalized by June 2015 and states must have implementation plans in place by June 2016.

The 2013 New Sources Rule sets a standard of 1,000 pounds of carbon dioxide-equivalent per megawatt-hour for newly built natural gas-fueled units and a standard of 1,100 pounds of carbon dioxide-equivalent per megawatt-hour for newly built coal-fueled units. The EPA expects that new coal-fueled facilities will be able to utilize carbon capture and sequestration technology to meet this standard. The agency is accepting public comments on the proposed standards through May 9, 2014.

Q. What emission reductions are being planned by MidAmerican?

A. Confidential Exhibit 1 of the April 2014 Plan Update provides a summary of the emission controls MidAmerican anticipates will be installed through 2023. MidAmerican will reflect in its future Environmental Plan and Budget updates any new regulatory requirements, including any required additional emissions reductions and changes in the allowance markets that cause significant adjustment to the level or timing of controls. The April 2014 Environmental Budget and supporting direct testimony of MidAmerican witness David Maystrick provide the details supporting the Plan.

Q. Does this conclude your prepared direct testimony?

A. Yes, it does.

STATE OF IOWA
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AFFIDAVIT
OF
JENNIFER A. McIVOR

STATE OF IOWA)
) ss:
COUNTY OF POTTAWATTAMIE)

I, Jennifer A. McIvor, being first duly sworn, depose and state that the statements contained in the foregoing prepared direct testimony are true and correct to the best of my knowledge, information and belief, and that such prepared direct testimony constitutes my sworn statement in this proceeding.

/s/ Jennifer A. McIvor

Jennifer A. McIvor

SUBSCRIBED AND SWORN to before me this 1st day of April, 2014.

/s/ Tammi R. Lear

Notary Public in and for the State of Iowa

Commission Number 772443
My commission expires April 5, 2015